DOCUMENT RESUME

ED 086 171 IR 000 017

AUTHOR Lasota, Peter E.
TITLE Test and Evaluation of Multi-Media Cadet Career Information and Counseling Center.
INSTITUTION Air Force Academy, Colorado Springs, Colo.
SPONS AGENCY Air Force Human Resources Lab., Brooks AFB, Texas.
REPORT NO AFHRL-TR-73-45
PUB DATE Oct 73
NOTE 16p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Career Education; *Career Planning; *Instructional Media; Media Selection; Military Personnel; Military Schools; *Occupational Guidance; Technical Reports; Televised Instruction; *Vocational Counseling
IDENTIFIERS *Air Force Academy

ABSTRACT

This research tests the effect of multi-media presentations as a supplement to the counseling process. The limits of the study have been set to test the impact of multi-media presentations for career information to cadets who are seeking counseling assistance for their initial Air Force assignment. The career decision process can be enhanced by TV cassettes. Career information materials can be made interesting and entertaining. TV cassettes opened new parameters in the multi-media and counseling fields. There are many uses for this system of recruiting, technical training, School of Military Science (officer) and ROTC. Costs are not as prohibitive as some anticipated. Some counselor time can be released because the vast majority utilizing this system did not seek counseling assistance. Users believed the outside experts more readily than members of the Academy "establishment." (Author)

ED 086171

AFHRL-TR-73-45

TEST AND EVALUATION OF MULTI-MEDIA CADET CAREER INFORMATION AND COUNSELING CENTER

By

Peter E. Lasota, Lt Col, USAF
USAF Academy, Colorado 80840

HQ AIR FORCE HUMAN RESOURCES LABORATORY
Brooks Air Force Base, Texas 78235

October 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Approved for public release; distribution unlimited.

AIR FORCE HUMAN RESOURCES LABORATORY

IR 000 017

AIR FORCE SYSTEMS COMMAND
BROOKS AIR FORCE BASE, TEXAS 78235

FILMED FROM BEST AVAILABLE COPY

NOTICE

When US Government drawings, specifications, or other data are used for any purpose other than a definitely related Government procurement operation, the Government thereby incurs no responsibility nor any obligation whatsoever, and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise, as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

This final report was submitted by the United States Air Force Academy, Colorado 80840, under project order AFHRL 73-02, job order HRLP7302, with Headquarters, Air Force Human Resources Laboratory (AFSC), Brooks Air Force Base, Texas 78235. James E. Wade, Major, USAF, Personnel and Manpower Programs Office, was the contract monitor.

This report has been reviewed and cleared for open publication and/or public release by the appropriate Office of Information (OI) in accordance with AFR 190-17 and DoDD 5230.9. There is no objection to unlimited distribution of this report to the public at large, or by DDC to the National Technical Information Service (NTIS).

This technical report has been reviewed and approved.

JAMES E. WADE, Chief
Personnel & Manpower Programs Office

Approved for publication.

HAROLD E. FISCHER, Colonel, USAF
Commander

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER AFHRL-TR-73-45	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE *(and Subtitle)* TEST AND EVALUATION OF MULTI-MEDIA CADET CAREER INFORMATION AND COUNSELING CENTER		5. TYPE OF REPORT & PERIOD COVERED Final 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Peter E. Lasota		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS United States Air Force Academy Colorado Springs, Colorado 80840		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS Project Order AFHRL 73-02 Job Order HRLP7302
11. CONTROLLING OFFICE NAME AND ADDRESS HQ Air Force Human Resources Laboratory Brooks Air Force Base, Texas 78235		12. REPORT DATE October 1973 13. NUMBER OF PAGES 14
14. MONITORING AGENCY NAME & ADDRESS*(if different from Controlling Office)*		15. SECURITY CLASS. *(of this report)* Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT *(of this Report)*

Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*

18. SUPPLEMENTARY NOTES

19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*

multi-media	counseling	Air Force Academy
media	cadet	audio cassette
software	audio-visual aids	16mm film strip
hardware	TV cassette	35mm sound slide
interview	survey	

20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

This research tests the effect of multi-media presentations as a supplement to the counseling process. The limits of this study have been set to test the impact of multi-media presentations for career information to cadets who are seeking counseling assistance for their initial Air Force assignment. The career decision process can be enhanced by TV cassettes. Career information materials can be made interesting and entertaining. TV cassettes have opened new parameters in the multi-media and counseling fields. There are many uses for this system in recruiting, technical training, School Military Science (Officer) and ROTC. Costs are not as prohibitive as some anticipated. Some counselor time can be released because the vast majority utilizing this system did not seek counseling assistance. Users believe the outside experts more readily than members of the Academy "establishment."

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

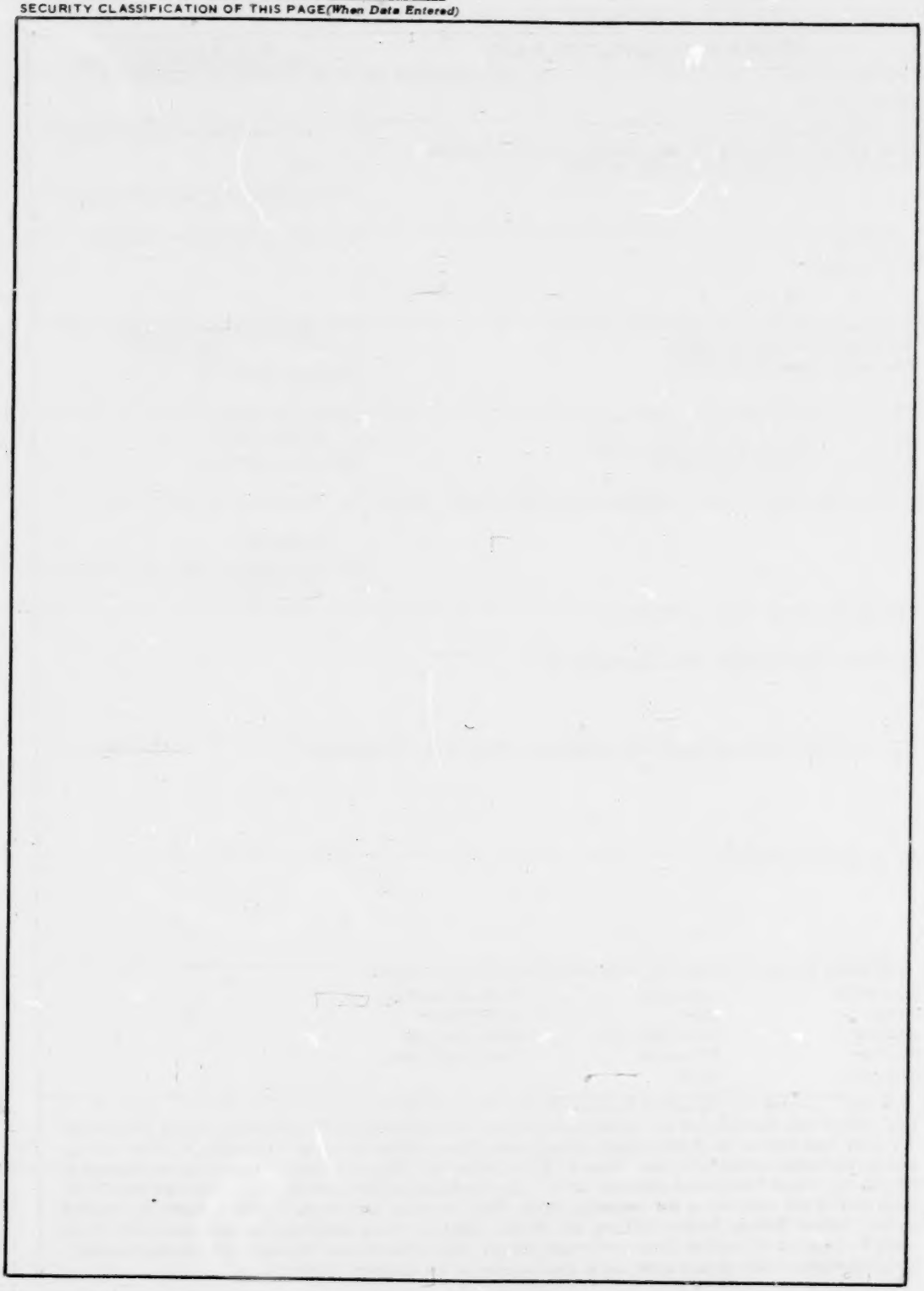

TABLE OF CONTENTS

	Page
CHAPTER I	
I The Problem	1
II Definitions of Terms Used	2
CHAPTER II	
I Chronological Development	3
CHAPTER III	
I Equipment	4
II Software Development	4
CHAPTER IV	
I Multi Media Facility	5
CHAPTER V	
I Research Findings	6
II Special Notes	10
CHAPTER VI	
I Summary	11
II Recommendation	12

CHAPTER I

The Problem and Definitions of Terms Used

Within the Air Force personnel framework, which is rapidly becoming attuned to the volunteer army concept, there is developing a need for more individual counseling in the career motivation and career development areas. Palace Flicks are a recent attempt to put out information on personnel policy and procedures. However, none of this information is really relevant to the cadet environment. It is believed that counseling aids can be developed which will assist individuals in the areas of learning, skill development, motivation, career information and career development. This research centers purely on the multi-media application for personal growth and career development.

I The Problem

Statement of the Problem. The Air Force Academy cadet is offered a choice in his initial assignment. If he is going to pilot training, he has a choice of base. If he is not flying-qualified, he has a choice of a career area for his initial assignment. In the past, the counselors have had to rely on their experience and published materials to assist the cadets in decisions which would have an impact on their entire career. It can be assumed that a wrong decision could cause an Academy graduate to become discontented with active duty and leave the service when his active-duty commitment expires.

This research is designed to test the effect of multi-media presentations as a supplement to the counseling process. The limits of this study have been set to test the impact of multi-media presentations for career information to cadets who are seeking counseling assistance for their initial Air Force assignment.

Research Procedure: The following design was prepared and utilized:

(1) Method of approach

(a) Research available literature, catalogs, other counseling centers and Air Force and civilian materials available in this area.

(b) Select the best hardware that is available.

(c) Select the best software that is available as a basis for initiating the program.

(d) Modify and improve the commercial software to better represent the differences of the Air Force Academy environment.

(e) Develop additional materials from Air Force and Air Force Academy resources.

(f) Gather data on the cadets' reactions to their experiences in using the technical materials via a brief questionnaire.

(g) Improve and update materials through the cadet-use phase which will be for one academic year.

(h) Develop professional materials for broader use throughout the Air Force.

(i) Tabulate usage.

(j) Prepare a paper evaluating the total research effort.

Importance of the Study:

The development of multi-media career information materials could have a significant impact in the area of job satisfaction and recruitment throughout the Air Force. Air Force recruiters, ROTC instructors, OTS counselors and airmen placement counselors at Lackland Air Force Base are all frustrated in their efforts today because they cannot provide information on how it really is in all the career areas in use by the Air Force. An up-to-date audio-visual presentation utilizing career developers, on-site portrayals and interviews with young officers and airmen on their job environment will fill this void.

II Definitions of Terms Used

Multi-media - for the purposes of this report will mean the use of more than one audio-visual aid.

Media - a mechanical aid designed to put out information. An example is a 35mm slide.

Software - term used to describe the materials which are produced for a specific objective and are used on a specific machine.

Hardware - a machine which is utilized for a specific learning purpose--also referred to as media.

Chapter II

Chronological Development

1.	Project approved	Nov 1971
2.	Space acquisition approved	Nov 1971
3.	Hardware and Software acquisition begins	Jan 1972
4.	Deliveries of equipment start	Mar 1972
5.	Evaluation of TV equipment begins	Mar 1972
6.	ATC agrees to support software development	Apr 1972
7.	Pilot project in software development completed	May 1972
8.	Cadet Counseling Center moves and multi-media center begins	May 1972
9.	Surplus equipment from AFHRL-Ed, Maxwell AFB arrives	May 1972
10.	Development of software for Laughlin and Laredo AFB's complete	Jun 1972
11.	AFHRL approves project continuation	Jul 1972
12.	Development of software on Pilot bases in S.E. CONUS complete	Jul 1972
13.	Development of 35mm sound-slide software begun	Jul 1972
14.	Software development on Pilot training bases in S.C. CONUS complete	Aug 1972
15.	Navigator training software complete	Sep 1972
16.	Grand opening of multi-media center	Sep 1972
17.	Advertising to potential users begins	Sep 1972
18.	Final copies of software arrive	Nov 1972
19.	Heavy use of center starts	Jan 1973
20.	Military Personnel Center updates software	Jan 1973
21.	Demonstrate concept to Hq ATC and School of Military Science (Officer)	Jan 1973
22.	SMS(O) copies software	Mar 1973
23.	Inquiry on system development from AFHRL, Lowry AFB	Mar 1973
24.	Complete data gathering	Apr 1973
25.	Complete software production on career fields at MPC	May 1973
26.	Data compilation and analysis	Jun 1973
27.	Submission of completed report	Jul 1973

Chapter III

Equipment

1. Hardware Procurement: In order to test which type of software would give the best results and would be most reasonable to produce, it was decided to investigate the use of four types of media. They were:

a. TV cassette.

b. 35mm sound-slide.

c. 16mm film strip.

d. Audio cassette.

The Super 8 was considered for inclusion in the project, but it was decided that the Air Force had sufficient units in use and the researcher could draw from experience of others in this area.

Other considerations for the selection of hardware included the type of support the project could expect from the Department of Instructional Technology at the Air Force Academy and the current state of the art in commercial software.

2. Software Development: It was obvious from the start that there was no commercial software items available on career information for Air Force specialities. In 1971 there was little, if any college-level software available through commercial channels. The state of the art was limited to junior and senior high school level materials.

The Cadet Counseling Center had some previously developed sound tapes available. These tapes were transposed to cassette and 35mm slides were added to provide the career information materials.

The researcher drew upon his experience and decided the greatest need for software was to provide information on flying training bases. This decision was based on the fact that 70% of each class enters the Academy flying-qualified and a like percentage actually goes on to pilot and navigator training. Col Dan Fulgram from AFHRL at Williams AFB, Arizona, emphasized that the software was the key to any learning center. The researcher then attempted to identify cadet needs and work at fulfilling them.

Captain Arlan Diamond (DFIT) contacted Air Force Audio-Visual Services (AFAVS) and came up with an estimated production cost of $1,000.00 per minute for AFAVS to develop software for use in the program. Realizing the research budget would not support this cost, it was decided to go to in-house produced software.

The initial project of software development was completed with the support of Air Training Command. After a script was developed, a team of four officers and NCO's visited Williams AFB, Arizona, to cut the pilot tape. The initial project required three days. This was later cut to one day for the filming of any flying training base. Initial costs ran approximately $21.00 per minute which was considerably below AFAVS estimates. After previewing the pilot tape with counselors and cadets, it was decided to press on with the project at other bases.

The remaining bases were grouped geographically and three more trips of a week's duration were undertaken. On each trip, a base a day was filmed on TV cassettes and the cost for software production was cut to $8.00 per minute because of decreased travel expenses.

As cadets began to view the TV cassettes on flying-training bases, it became obvious that a second cadet need was not being fulfilled. The second identified need was for career field information. It was decided to ask the "experts" for information. The Air Force Military Personnel Center (MPC) agreed to assist in the project. Throughout the research, over 30 career developers from MPC were interviewed on the media of TV cassettes. Many of the tapes were cut at the Air Force Academy. Others were produced at Headquarters, MPC.

Commercial 16mm film strips and audio cassettes were located and these were added to the multi-media center to round out the software package.

Chapter IV

Multi-Media Facility

The development of the research project came at the same time that the Cadet Counseling Center was programmed to be enlarged. In the new facility, one fourth of the total space was dedicated to the multi-media function. However, because of the research nature of the project, no monies were available for carrels or dividers. Hence, everything in the way of equipment in the center is of a temporary nature. For example each carrel is a table with a discarded partition acting as a divider. The career information room is separated by dividers, but there is no soundproofing between the two rooms. The Air Force Academy has ordered floor-to-ceiling soundproof dividers to separate the career information room and multi-media room from the remainder of the center. This will becompleted shortly.

Each media is capable of having a headset attached so there is little noise between carrels. Although the set-up is far from ideal, there have been only minimal problems in the operation of the facility.

Self-help has been the key to the development of this project. The Air Force Academy provided little in the way of money or equipment. However, a great amount of manpower was allotted to this project. In addition to the researchers' time, one NCO gave about one-third of his time to the project for a full year. DFIT contributed greatly to the filming crews both at the Academy and at on-site locations. Without this support, the project would never have been completed.

Presently, the Academy has paid for new television receivers and four dozen TV cassettes to support the project as it becomes operational. It is anticipated monies will become available for professional carrels in FY 75. Money will also be made available for upgrading all software in FY 75.

Chapter V

Research Findings

The researcher was interested in two very basic pieces of information in this research. They are:

(1) How often was the equipment being used?

(2) Were the users satisfied?

The first question was answered by a sign-in roster at the door of the facility. This roster merely told us how many people entered the facility on a daily basis. It did not reflect the actual number of software items each using individual viewed. The latter could only have been accomplished by full-time supervision which was unavailable.

The number of cadets who utilized the facility is as follows:

September - 27	February - 660
October - 25	March - 169
November - 32	April - 73
December - 55	May - 26
January - 209	June - 5

There was a gradual increase in utilization of the facility as the word spread. Note the exceptionally high usage in January and February. This is due to the fact that seniors choose their assignments in February.

A 19-item questionnaire was randomly administered to 980 cadets who utilized the facility. The results are as follows:

Question 1. Month that facilities were used:

A.	Sep - Oct	20.3
B.	Nov - Dec	34.8
C.	Jan - Feb	44.2

Comment: The administration of the questionnaire was discontinued in early April.

2. My class year:

A.	1973	49.4
B.	1974	11.4
C.	1975	6.7
D.	1976	31.7

Comment: Almost half of those using the facility were seniors. The large number of freshmen users were due to seniors providing projects for the freshmen to assist them in information gathering. Also, the military training department has assignments in career information.

3. Flying qualified?

A.	Pilot	75.0
B.	Nav	9.3
C.	Yes, but not going to fly	3.1
D.	Not qualified	11.9

Comment: A large portion of those at the Academy go to flying training. Another reason for so many being flying qualified is that the early software developed centered on flying training bases.

4. Have you seen a counselor from this center?

A.	Yes	27
B.	No	71.8

Comment: We feel that the objective of increased counseling assistance was met because 70% of the users did not utilize a counselor.

Media

5. I used:

A.	TV cassette	73.4
B.	35mm sound slide	1.5
C.	Film strip	19.7
D.	Audio tape	1.0
E.	Printed materials	3.6

Comment: There is no doubt that the TV cassette was the most popular form of media. This could be due to the software and the fact that TV is normally an entertaining media.

6. The media:

A.	Excellent attention holder	32.2
B.	Kept my interest	57.8
C.	So-so	8.3
D.	Was somewhat distracting	.5
E.	Was very distracting	0

Comment: 90% felt the media was interesting.

7. Assuming you needed more information, would you utilize this media again?

A.	Yes	85.4
B.	Maybe	13.0
C.	No	1.0

No comment.

8. The material I used was on:

A.	Pilot training bases	59.8
B.	Navigator training	3.1
C.	Career areas	13.0
D.	Study skills	21.3
E.	Motivation	0

No comment.

9. The material I used was on:

A.	Personality development	2.6
B.	Film strip specials	12.5
C.	Other	13.5

No comment.

10. The running time of software used was:

A.	0-10 minutes	7.2
B.	10-20 minutes	50.0
C.	20-25 minutes	16.6
D.	25-30 minutes	11.9
E.	Over 30 minutes	9.8

Comment: 10-30 minutes was the most popular length.

11. The time used was:

A.	Too long	10.4
B.	Too short	5.2
C.	OK	80.2

No comment.

12. Did the software hold your interest throughout the presentation?

A.	Yes	68.7
B.	Somewhat	23.9
C.	No	3.1

Comment: This points out some room for improvement in certain software.

13. Did you get the information you came for?

A.	Yes.	46.8
B.	Most of it.	38.5
C.	Need a little more.	7.2
D.	Need much more.	2.6

No comment.

14. The content can be improved by: (you may indicate more than one)

A.	Increase lecture material.	9.8
B.	Increase television footage.	12.5
C.	Increase the number of still shots	3.1
D.	Use a better guest speaker	7.8
E.	Leave it alone--has a good balance as is.	61.4

Most felt the content was OK.

15. I would like to see the software include more information in the areas of: (you may indicate more than one)

A.	Social life.	26.5
B.	Assignment policies.	9.8
C.	Base facilities	8.8
D.	Specific job tasks	21.8
E.	All areas are satisfactorily covered.	28.1

No comment.

16. On the 5-point scale below, rate your overall evaluation of the media and software you have just viewed.

Poor		Average		Excellent
1	2	3	4	5
A. 1.0	B. 4.6	C. 10.4	D. 53.1	E. 22.3

Comment: 75.4% felt the material was above average to excellent.

Critique Questions
Optional

(For Questions 17, 18 and 19, expand on supplemental sheet)

17. Specify any additional information you wish to be covered:

18. How can we better utilize this method of presenting information:

19. Feel free to make any other positive or negative comments on this program:

Comment: The only comments received on Questions 17-18-19 indicated the cadets wanted more specific information on career fields. In late May 1973, twenty-three additional tapes were cut at MPC. This completes the career field library.

Based on the overwhelming popularity of the TV cassette, the researcher feels that a multi-media center can be reduced to a media center with only one media, that is, the TV cassette. The researcher found that:

1. TV was popular.
2. Software was easy to produce.
3. Anything that the other three media could do can be done on TV.
4. TV required minimal maintenance.
5. The software costs were cheap.
6. Back-up materials were easy to maintain.

Special Notes

a. Colonel Hank Ezelle, Chief, Officer Career Development Division, MPC, has seen this system in operation. He fully supports the concept of distributing career information through the multi-media concept.

b. SMS(O) has copied most of the Air Force Academy non-TV software. As soon as a TV cassette player becomes available to them, they will copy all Air Force Academy software at a cost of about $1.00 per minute.

c. The Technical Training School at Lowry AFB, Colorado, wanted to know if any of the Academy software is applicable to their mission.

d. The TV cassette system is very flexible. It has many applications in the field of education.

e. The Air Force Academy was left with a multi-media counseling center as a result of this research.

VI

Summary

The researcher feels that maximum results were gained from this project. This conclusion is supported by the fact that this was "live research" which had consumer use throughout the developmental stages. This concept allowed the project to become operational with a minimum additional outlay of monies. The Air Force Academy benefited by having a problem area researched and somewhat solved from this project. The research opens up the utilization of this project's findings for use in other Air Force agencies such as Air Training Command and Air University.

When General A.P. Clark, Air Force Academy Superintendent, reviewed the research project in April 1973, he asked why the other media were being used when it is obvious TV is so much better. He was informed that this was not known at the start of the project but that it was obvious now. He stated he wanted the system to become a permanent part of the counseling center and that TV be the single mode of operation. The research findings bear out General Clark's feelings.

Conclusions: The researcher has concluded:

1. That the career decision process can be enhanced by TV cassettes.

2. That career information materials can be made interesting and entertaining.

3. That TV cassettes have opened new parameters in the multi-media and counseling fields.

4. That there are many further uses for this system in recruiting, technical training, School Military Science (Officer) and ROTC.

5. That costs are not as prohibitive as some anticipated.

6. Some counselor time can be released because the vast majority utilizing this system did not seek counseling assistance.

7. That users believe the outside experts more readily than members of the Academy "establishment."

Recommendations:

1. As the researcher began his work in this area, it was apparent there have been numerous attempts in the Air Force to use the multi-media concept for learning and information processing. It soon became obvious that many efforts "died on the limb" as the idea originator went on to a new job. As a result of this, very little research in this area is published and when a new person starts a media center, he immediately must "reinvent the wheel." The researcher feels very strongly that a career field must be established that will identify personnel with experience in the development of media centers.

There are currently efforts in this area at the Air Force Academy, (SMS(O), Lackland AFB, Instructor Training School, Maxwell AFB, Alabama, Navigator Training, Mather AFB, California, and Pilot Training, Williams AFB, Arizona. It is predicted that all pilot training bases will have a learning center in FY 74.

The new specialty code must be able to identify a person who is familiar with the multi-media concept for educational purposes as opposed to a person skilled in TV or audio-visual productions.

2. Career information requirements are not unique to the Air Force Academy. Other agencies such as Air Training Command and Air University should be made aware of the availability of this concept to meet their needs in recruiting and development of officers and airmen.

3. All equipment utilized in this project remains at the Air Force Academy as an operational system and for on-going research.

4. The state of the art continues to be researched and developed so special needs can be recognized and fulfilled at local base levels.